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ABSTRACT

This paper reconsiders Chomsky's Adjunction Condition and suggests some modification of the theory of barriers to solve problems arising mainly from the improper definition of the blocking category and the barrier. It is argued that in S-structure, there is no adjunction in movement except extraposition and topicalization. First, it is suggested that the adjunction conjunction is too powerful in that it allows many ungrammatical sentences. To solve the problems, the assumption was made that there is no adjunction at S-structure except extraposition and topicalization. Next, only inherited barriers were assumed, which is to consider IP, traditionally a defective category, as a normal lexical category. In fact, under the modified barrier theory, subjacency condition can be said to be stronger than it was in Chomsky (1986). In this study, the modified theory was applied to every sentence that had raised problems for barriers and showed that the new definition works well. (JL)

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ON THE CONDITION OF ADJUNCTION IN BARRIERS

ED 382 041

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Abstract: Even though Barriers theory is considered to be an innovative approach toward the Universal Grammar, it has some conceptual problems. The first problem is concerned with the definition of the blocking category and the barrier. According to the definition, VP is a blocking category and an inherent barrier. However, VP-adjunction should always be permitted to avoid its barrierhood. This approach is no better than that which does not regard VP as a blocking category and a barrier, consequently permitting no VP-adjunction. The second problem is that I-projections are defective categories. Ad hoc rules for explaining the CNPC and the WH-island phenomena may be added as drawbacks in the theory of barriers. To solve these problems, I suggest some modification of the definitions of Barriers.

Introduction

In this paper, I reconsider Chomsky's 'Adjunction Condition(Chomsky 1986:p.6)' and suggest some modification of the theory of barriers to solve some problems arising mainly from the improper definition in Chomsky's barriers. In short, I argue that in S-structure, there is no adjunction in movement except extraposition and topicalization. To support this hypothesis, I assume only inherited barriers.

Problems in Adjunction Condition

Chomsky(1986:p.6) suggests the following condition on adjunction which allows adjunction to VP but not to CP and NP;

(1) Adjunction Condition
Adjunction is possible only to a maximal projection that is a nonargument.

Under the condition, adjunction to an argument NP or CP is not allowed, while adjunction to a nonargument VP is allowed. Then let's examine whether adjunction to other nonargument maximal projections is possible or not.

WH-island constraint phenomenon :

(2) ?? What do you wonder who saw ?

(2) has been traditionally considered to violate the Subjacency condition. When we first move 'who', the result will be (3);

(3) you wonder [cp who i [c' [+WH] [ip t i saw what]]]

When 'what' is moved in (3), it is first adjoined to the VP in the embedded clause and then to the VP of the main clause, and finally moves to the Specifier position of the main clause. The process is shown in (4);

(4) [cp what $_j$ [c' do$_k$ [ip you t_k [vp t_{2j} [vp wonder [cp who $_i$ [c' e [ip t_i [vp t_{1j} [vp see t_j]]]]]]]]]]

Here the problem arises when movement occurs from $t_{1\,j}$ to $t_{2\,j}$. In this step the blocking category which dominates $t_{1\,j}$ is not VP but IP, and the CP dominating the IP is a barrier. The movement is 1-subjacent because it crosses over one barrier. Actually this prediction contrasts with that of LGB in which it is judged as the violation of the Subjacency. However, when 'what' is moved, if it is first adjoined to VP and then to the IP of the embedded sentence instead of the VP of the higher sentence, the result will be different.

(5) [cp what $_j$ [c' do $_k$ [ip you t_k [vp $t_{3\,j}$ [vp wonder [cp who $_i$ [c' e [ip $t_{2\,j}$ [ip t_i [vp $t_{1\,j}$ [vp see t_j]]]]]]]]]]

The movement from $t_{1\,j}$ to $t_{2\,j}$ is not problematic because no barrier intervened. Look at $t_{2\,j}$ carefully. The IP of the embedded sentence is not a blocking category for $t_{2\,j}$ because the IP doesn't exclude $t_{2\,j}$. The CP is L-marked by `wonder', so CP is not a blocking category. Therefore there is no barrier between $t_{2\,j}$ and $t_{3\,j}$ and the movement from $t_{2\,j}$ to $t_{3\,j}$ obeys Subjacency and the ECP. However this derivation must be barred because (2) is not grammatical. That is, in syntactic movement we should allow adjunction to VP but we should not allow adjunction to IP. However, it is ad hoc to maintain that adjunction to nonargument VP is allowed and adjunction to a non-argument IP is barred. In addition, Lasnik and Saito analyze topicalization be a case of IP adjunction and if they are correct, barring IP adjunction is not plausible.

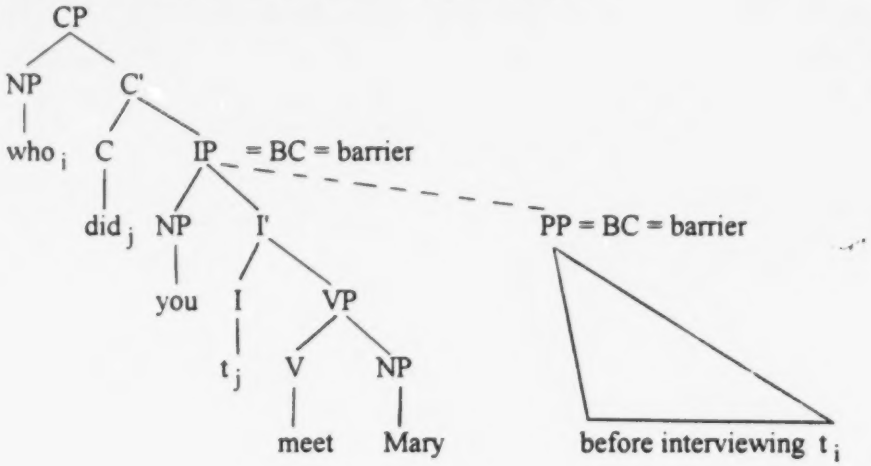
Even assuming a condition which prevents IP-adjunction, there is another derivation which can allow legal derivation. That is, if 'what' adjoins to the VP of the matrix sentence after 'what' is adjoined to the embedded VP, then it crosses over one barrier, CP. In this case to avoid the barrier, we can assume a derivation

in which 'what' is adjoined to the Spec of CP .Then, CP does not exclude 'what' and this derivation has the same effect as it has when 'what' moves through the Spec of CP. Therefore, the sentence should be grammatical. As May(1985) shows, the element adjoined to the Spec of CP c-commands its trace under the definition of the domination by exclusion. To prevent adjunction to CP we cannot say that because `who' in Spec of CP is an argument, adjunction to CP is not permitted. This is because the violation of WH-island constraint is more serious when an adjunct is placed in the Spec of CP. Therefore, adjunction to the Spec of CP must be prevented

Adjunct condition: The following sentence violates the adjunct condition. Although Chomsky(1986) says that it can be explained in terms of barriers, he doesn't show the process clearly.

(6) * who $_i$ did you meet Mary before interviewing t_i ?

(7)



In (7), PP is not L-marked, so it is a blocking category and becomes a barrier. IP is also a blocking category and a barrier because it immediately dominates PP. Therefore the movement of 'who' crosses over two barriers which means a violation of subjacency and the sentence is ungrammatical. In this case the internal structure of PP is [pp before [cp t_3 [ip PRO [vp t_2 [vp interviewing t_1]]]]]. When t_3 moves to the Spec of CP, it crosses over two barriers PP and IP. However, there is evidence against this structure.

(8) John said he would leave the party before speaking to anyone, and **leave the party before speaking to anyone he certainly did.**

In 8), the PP (before-phrase) is a constituent of VP because it is moved forward together with VP by VP-preposing. In (8b) the PP is not the sister of V because the `do so ' substitution doesn't take place to include the PP. Therefore it is not correct to analyze PP to be immediately dominated by IP. The data below show that PP should be immediately dominated by VP(Tiedeman 1989:19-20).

(9) VP-preposing
a. Bill said that John would go home before he saw Mary, and go home before he saw Mary he did.

b.* Bill said that John would go home before he saw Mary, and go home he did before he saw Mary.

(10) WH-cleft
a. John went home before he saw Mary.
b. What John did was go home before he saw Mary.

(11) VP-deletion
John went home before he saw Mary and Bill did too.

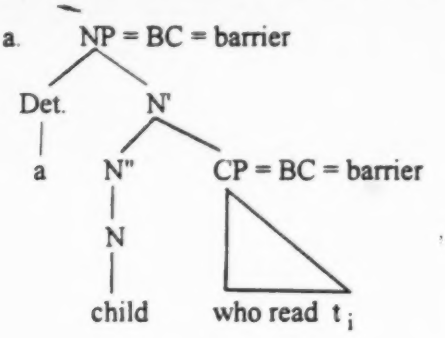
Therefore, if PP is within VP in (6), then when a constituent moves from the Spec of the CP, complement of P, it can be adjoined to the higher VP instead of being adjoined to the Spec of higher CP. If this adjunction to VP is possible, the movement crosses over only one barrier, PP. Then the movement has a 1-subjacency which is a weak violation of subjacency and the sentence must be judged marginal. In addition, there is another possible derivation which is a more serious problem to the theory. If we accept Chomsky(1986)'s adjunction condition which always allows adjunction to a non-argument position, then there is no way to prevent adjunction to PP. Then, the movement from the embedded [SPEC, CP] to adjoine to PP crosses over no barrier, and when the constituent moves from the adjoined PP to adjoin to the VP of the higher sentence, it doesn't cross over any barrier. Of course, this derivation does not explain the ungrammaticality of the sentence

Complex NP constraint phenomenon : Another problem found in Chomsky(1986) is that it can not explain the Complex NP Constraint phenomenon(CNPC) properly. In general, extraction from a complex NP is ungrammatical.

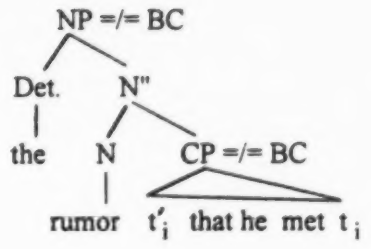
(12) a. * Which book $_i$ did John meet [np a child [cp who read t_i]] ?
b. ?? Which girl $_i$ did Tom hear [np the rumor [cp that he met t_i]] ?

The structure of the above complex NP's is (13);

(13) a.



b.



When we extract from the relative clause (13a), it crosses over two barriers CP and NP, which is the violation of subjacency and the sentence is correctly judged as ungrammatical. In (13b) CP is not a blocking category because it is subcategorized and L-marked as a complement of N. NP is not a blocking category either because it is L-marked by V. Therefore, extraction of the WH-phrase from the noun complement clause should be permitted. But (12b) is marginal at best. To solve this problem, Chomsky(1986) maintains that the CP which receives oblique case from N as a complement of N is an intrinsic barrier. In addition to this, he says that even though the CP which receives oblique case from N is a barrier, it is not a blocking category, so the NP which immediately dominates the CP cannot be an inherited barrier according to the definition of barrier(Chomsky 1986:14). Therefore extraction from a noun complement clause weakly violates subjacency. Even though this explanation, predicts the difference of grammaticality of the two types of sentence, there arise many problems. First, "why does the CP which receives oblique case become a barrier ?" and "is it possible for a sentence to receive a case(cf. Stowell 1981) ?" Second, a relative clause is not subcategorized and a noun complement clause is subcategorized. If we follow the adjunction condition (1), adjunction to the relative clause should be allowed, while adjunction to the noun complement clause should be prevented. However, if we permit adjunction to a relative clause, then extraction from a relative clause crosses over no barrier. A noun complement clause subcategorized by N and so no adjunction is allowed.

NP-movement : In the case of WH-movement, a WH-object adjoins first to VP to avoid the barrierhood of VP and then moves to the Spec of CP. However, in the case of NP-movement, an NP cannot adjoin to VP. If adjunction to VP occurs, the resulting chain cannot be licensed as an argument chain. Therefore, for NP-movement, no adjunction is allowed. Consider the following sentence;

(14) a. Mary seems to be smart
b. [ip Mary $_i$ [seem-I] $_j$ [vp t $_j$ [ip t $_i$ to be smart]]]

If VP-adjunction is barred in NP-movement, the movement from t i to `Mary' in (14) comes to cross over one barrier, VP. To solve this problem Chomsky(1986) introduces `feature sharing'. In (14) `Mary $_i$ ' and t $_i$ are coindexed by movement ,and [seem-I] $_j$ is also coindexed with t $_j$ . In addition, `Mary' and [seem-I] are coindexed by Spec-head agreement,so that i = j. Then t $_j$ can antecedent-govern t $_i$ because there is no barrier between them and both of them have the same index. In this case, to allow the antecedent-government between two elements, we combine two separate chains into one extended chain(Chomsky 1986:74).

(15) Extended Chain
a. $\delta = (\alpha 1, \ldots, \alpha_n, \beta)$ is an extended chain if $(\alpha 1, \ldots \alpha_n)$ is a chain with index i and β has index i.

b. Chain coindexing holds of the links of an extended chain.

According to the condition in (15), an extended chain is licensed when two chains are coindexed and when subjacency and antecedent-government are obeyed between α_n and β. This assumption explains the following example(Chomsky 1986:75);

(16) a. * Mary seems that it appears to be smart.
b. Mary $_i$ [seems–I] $_j$ [vp t $_j$ [cp that [ip it appears [ip t $_i$ to be smart]

In the above sentence, the index of the chain (Mary, t) is shared with `seem' after V-raising in the matrix sentence; however the trace of `seem' , t $_j$, does not govern t $_i$, so the latter yields an ECP violation. That is, the antecedent-government condition is not obeyed because of the barrier CP between t $_i$ and t $_j$, so that the sentence is judged ungrammatical.

Now consider a simple passive sentence.

(17) a. Mary $_i$ was killed t $_i$
b. [ip Mary $_i$ [be-I] j [vp' t $_j$ [vp killed t $_i$]]]

In this structure VP intervenes in the movement while in the raising structure there is an IP intervening. There is no problem in antecedent-government in the

raising structure because IP is not a barrier; however in the passive structure, VP, which is a barrier, intervenes and prevents antecedent-government.
In (17b), t_j cannot antecedent-govern t_i because of VP. To solve this problem Chomsky(1986:76) assumes that "VP is one of the two segments of the verb phrase, not a category in itself that excludes t_j, whether it is base-generated or formed by an adjunction rule". Then " t_i is properly governed in the extended chain (be, t_j , t_i) as required, independently of theta-government by `killed' "(Chomsky 1986:76). Consider the following more complicated sentence;

(18)' a. Mary i seems to have been killed t i .
b. [ip Mary i [seem-I] j [vp t j [ip t' i to [vp have [vp be [killed t i]]]]]

To explain the sentences which have the aspectual verbs Chomsky(1986:77) assumes the relation of head-head agreement(= index sharing) between I and the aspectual verbs V* as in "... I [vp V* NP ...] ". He says that "there is (indirect) agreement between the subject and each aspectual verb of VP, as a reflex of SPEC-head agreement"(ibid. p.77). That is, based on the SPEC-head agreement, the Inflection `to' has the same index with t j in the Spec of IP , and then ,based on the head-head agreement, the aspectual verb `be' has the same index of i . Then `be' can antecedent-govern $t_i$ . However, his assumption has some problems as follows; first, is it intuitively plausible to assume agreement between ` to' and `be' in the above sentence ? Second, is it plausible to assume Spec-head agreement between ` t'_i ' and ` to ' which is a tense-lacking infinitive ?

The problems discussed in this section are mainly, I think, from the implausible definition of adjunction which considers VP as a barrier and doesn't allow the adjunction to VP in passive. Another problem here is that we combine a head-chain with an argument -chain to have an extended-chain, and consider this extended-chain as an argument-chain. However we cannot find other evidence which can support this assumption.

So far I have discussed the implausibility of the adjunction condition in barriers with many counterexamples, all of which show that the condition which allows free adjunction to any non-argument maximal projection is so powerful that it allows many ungrammatical sentences. Especially it is awkward to allow adjunction to a VP to avoid the barrierhood. Therefore from now on I will discuss the possibility that we can maintain the theory of barriers without admitting adjunction in syntactic movement.

Application of the New Theory

Since we allowed adjunction to VP in barriers, we can think of the possibility that VP is not a blocking category and not a barrier ,either. Actually it is hard to find data which show that the ungrammaticality of a sentence is caused by the barrierhood of VP. VP is considered a blocking category because it is not L-marked. Therefore if we find evidence which shows that VP is L-marked, that is, theta-governed, then it will enable us to give up the necessity of adjunction to VP. Consider the following sentences ;

(19) a. [vp fix the car] $_i$, I wonder whether he will t_i

b. * [ip he will fix the car] i , I wonder whether t_i

c. * [np car] $_i$, I wonder whether he will fix the t_i

(19) shows that ,different from C or D, I has an ability to theta-govern its complement as well as other lexical categories. In addition, like lexical categories, there is no case in which I appears as a null category in a sentence, which is different from C or D. Further another supporting evidence for a difference between I and C/D is that I always makes its Spec an argument position, but C/D doesn't. For these reasons, I will just assume that I and auxiliaries including `have' and `be' belong to a lexical category, while C and D belong to the functional category. Then maximal categories IP and NP are blocking categories.

Since we assume I as a lexical category, IP is not a `defective' maximal category any more. However, WH-movement moves a wh-element to the Spec of CP, crossing over IP which is now considered as a non-defective maximal category. To avoid this unfavorable result, I assume that while IP is a blocking category, it is not a barrier itself. Instead, the maximal projection immediately dominating IP becomes a barrier. And the inheritance is effective only once. Under this assumption, there is no problem arising from WH-movement inside CP. In addition to this, because IP is assumed to transmit its barrierhood to its immediately dominating maximal projection, this should be generalized to the other maximal projections. Then the resulting definition for the new blocking category and barriers would be as follows;[1)]

(20) Blocking category

α is a blocking category for β iff:

a. α is not L-marked,

b. α immediately dominates β

(21) Barrier

A maximal projection α which immediately dominates a blocking category β is a barrier.

(22) L-marking

α L-marks β iff α is a lexical category that theta-governs β .

(Chomsky 1986:15)

Now let's apply the new theory to the sentences which raised some problems with Chomsky(1986)'s theory. Consider the following WH-island phenomena (= same with (2));

(23) a. * What $_i$ did you [vp" wonder [cp' who $_j$ [ip' t_j [vp' said [cp that [ip Bill [vp saw t_i]]]]]

b. **What $_i$ did you wonder [cp' who $_j$ [ip' t_j [vp' knew [cp who $_k$ [ip t_k [vp saw t_i]]]]]]

(Chomsky 1986:38)

According to Chomsky(1986), when `what' moves to the Spec of the matrix CP in (a), it crosses over one CP' barrier. Then the sentence should be at most awkward not `ungrammatical'. However, the sentence is ungrammatical as it is. To solve this problem, he assumes that "the most deeply embedded tensed clause is an extra barrier for the movement". Under his assumption, when `what' moves in (a), it crosses over one extra IP barrier and the inherited CP' barrier, so the movement is 2-subjacent and is predicted to be ungrammatical. Consider the sentence (b); if VP-adjunction is allowed, the movement crosses over two barriers CP and CP' and the trace t i is lexically governed. However this sentence is worse than (a). To explain this, Chomsky also depends on the extra IP barrier in (b). That is, When `what' adjoins to VP', it crosses over one extra IP barrier and one inherited CP barrier.Then the move is 2-subjacent, and in the next move, it crosses over one inherited CP' barrier. Therefore the whole construction is 3-subjacent and so (b) is worse than (1).

However, if this explanation based on the extra barrier is correct , the following sentence is predicted to be at least awkward because the movement is 1-subjacent.

(24) What $_i$ did you think [cp [ip Mary ate t_i]] ?

That is, under Chomsky(1986), the sentence should be awkward because in the second step of movement, `what' crosses over one extra barrier. However this prediction is not borned out and therefore Chomsky(1986)'s assumption for the extra barrier can be said to be invalid.

Now let's see how the new theory explains this problem.
In (a), when `what' moves , it cannot adjoin to VP's because our theory disallows adjunction in movement. Therefore `what' should move from the Spec of CP directly to the Spec of the matrix clause. Then the movement crosses over one CP' barrier which inherits its barrierhood from IP'. In (b), when `what' moves , it must move directly to the Spec of the matrix clause and during movement, it crosses over two barriers CP' and CP which immediately dominate IP' and IP respectively. Since (b) is 2-subjacent, we can easily predict that (b) is worse than (a).(here under the modified theory, we should assume that 1-subjacency is nearer `ungrammaticality' than `awkwardness' as we can see from the ungrammaticality of (a)) The new theory works in the problems above.

Consider the sentence below(=(6);

(25) a. * Who$_i$ did you meet Mary [pp before interviewing t_i] ?
b. Who$_i$ did [ip' you [vp' meet Mary] [pp before [cp t'_i [ip PRO [vp interviewing t_i]]]]]

Here PP is not L-marked, so it is a blocking category. When `Who' moves to the Spec of CP within PP, it crosses over no barrier. Then when it moves to the Spec of CP, it cannot adjoin to the non-argument PP by the new condition which bars the adjunction in syntactic movement. Therefore `who' must move directly to the Spec of the matrix CP. In this movement, it crosses over one barrier, IP which immediately dominates the blocking category PP. Therefore , the sentence is 1-subjacent and is predicted as ungrammatical as it is. Of course we can think of another possibility for the derivation as I showed in section 2.2. That is, we can think of PP generated within VP. However the result is the same with the case of the PP immediately dominated by IP. That is, if we assume PP within VP, then a VP which immediately dominates a blocking category (here the PP) will be a barrier. In this case , IP cannot be a barrier because IP does not immediately dominates a blocking category but a barrier by definition. Therefore the movement crosses over only one barrier. So the new theory also works for this problem.

Next is the Complex NP phenomenon(=(12))

(26) a. * Which book $_i$ did John meet [np a child [cp who $_j$ [ip t_j read t_i]] ?
b. ?? Which book $_i$ did Tom hear [np a rumor [cp that [ip you read t_i]] ?
(Chomsky 1986:34-35)

Consider (a) first. As we have discussed in (13), in (a) IP is not L-marked, so it is a blocking category and CP is not L-marked, so it is also a blocking category. When `which book' moves, it crosses over two barriers, CP which immediately dominates the blocking category IP and NP which immediately dominates the blocking category CP. Therefore the sentence is correctly predicted to be ungrammatical. However the modified theory is confronted with a difficulty in (b). That is, it cannot correctly predict the grammaticality of (b). (Chomsky(1986) explained the difference in grammaticality between (a) and (b) in terms of the oblique case from N).

Let's apply the modified theory to (b). Since the N `rumor' L-marks CP, CP is not a blocking category ,nor is NP. Then `which book' can move from the Spec of the embedded CP to the Spec of the matrix CP freely.

The only thing we can depend on in this stage to check the grammaticality of sentences is the status of traces. In fact, so far linguists have depended on two methods to explain linguistic data , one of which is the binding relation, especially between an antecedent and its trace, and the other is the government of the trace by a head.

Let's look at the structure of (b) carefully.

(27= 26b)
?? Which book $_i$ did John hear [$_{NP}$ a rumor [cp t'_i [c' that [ip you read t_i]]]] ?

In fact, the antecedent `which book' can antecedent-govern t'_i in the Spec of CP because there is no barrier between them under the modified theory. It is clear that the problem is not from the binding relation. Rizzi(1989:196) gives a very helpful explanation for this case. Rizzi(1989:197), accepting Cinque's proposal, says that " nouns should be inadequate governors. ... a maximal projection which is not selected by a [+V] head is a barrier. ... ". The condition he suggests is as follows;

(28) XP is a barrier if it is not directly selected by an X^0 non-distinct from [+V]

This condition implies that " nouns, contrary to verbs and adjectives, will never be able to govern inside a lower maximal projection". Consider the following example DP he gives and one corresponding sentence.

(29) a. ?* [$_{DP}$ John's$_i$ [np t'$_i$ [n' appearance [ip t$_i$ to be sick]]]]
(Rizzi 1989:196)

b. John$_i$ I [vp t'$_i$ appear [ip t$_i$ to be sick]]

In (a) there is no problem in movement. No barriers are crossed. In terms of antecedent-government, there is no problem. Clearly t'$_i$ can do it. Therefore the problem should be from the relation between N`appearance' and the trace t$_i$ in the Spec of IP. According to Rizzi, we can make an explanation as follows ; even though the N `appearance' L-marks its complement IP, it cannot L-mark t$_i$ in the Spec of IP since it is [-V] as Rizzi defined in (28). Then the trace t$_i$ in the Spec of IP is not licensed, therefore the sentence is judged as ungrammatical. On the other hand , in (b) the verb `appear' can L-mark IP and also L-mark t$_i$ in the Spec of IP by Spec-head agreement as defined in (28). In the line of Rizzi's proposal, consider (27): The N `rumor' L-marks IP, but since it is [-V], it cannot L-mark the Spec of IP. Therefore t' i cannot be licensed. Then we can explain the difference in grammaticality between (26a, b) . First, (26a) is 2-subjacent, so it is ungrammatical. In (26b), even though it doesn't cross over any barrier, one of the traces is not licensed by a head, so it is not grammatical. However, because (26a) seriously violates subjacency, (26a) is worse than (26b) which violates only a licensing condition.[2)]

The following sentences are showing NP-movement.

(30) a. Mary seems to be smart (=(14))
a'. Mary$_i$ [seem-I]$_j$ [vp' t"$_i$ [v' t$_j$ [ip t'i to [vp t$_i$ [v' be smart]]]]]

b.* Mary seems that it appears to be smart .(=(16))
b'. Mary$_i$ [seem-I]$_j$ [vp' t"$_i$ [v' t$_j$ [cp that [ip' it [appear-I]$_k$ [vp [v' t$_k$ [ip t'$_i$ to [vp t$_i$ [v' be smart]]]]]]

c. Mary was killed .(=(17))
c'. Mary$_i$ [was-I]$_j$ [vp' t"$_i$ [v' t$_j$ [vp t'$_i$ [v killed t$_i$]]]]

In (30a) , instead of assuming feature-sharing , we can explain the grammaticality of (a) in terms of subjacency and the licensing condition.

[seem-I]$_j$ L-marks the trace t"$_i$ in the Spec of VP' because it L-marks VP'.[3)]

The movement from t'$_i$ in the Spec of IP to the matrix clause obeys subjacency condition of the modified theory. Therefore (30a) is predicted to be grammatical. On the other hand, (30b) has a different story. Even though all the traces are licensed by [+V] category, the movement from the Spec of the most deeply embedded IP to the Spec of matrix VP violates subjacency. That is, the movement crosses over one barrier CP which immediately dominates the blocking category IP', so it is judged as ungrammatical as it is. In (30c), subjacency is obeyed, and traces are also well licensed by [+V] category such as I and verbs. Therefore, the sentence is grammatical.

Conclusion

So far I pointed out some problems which arose from the improper definition of the adjunction condition of barriers. As I discussed in section 2, the adjunction condition is too powerful in that it allows many ungrammatical sentences. To solve the problems, I first assumed that there is no adjunction at S-structure except extraposition and topicalization. Secondly, I assumed only inherited barriers , which is to consider IP, traditionally a defective category, as a normal lexical category. Under the new assumption, unlike I which L-marks VP, C and D which lack the ability of theta-government make IP and NP a blocking category, and the immediately dominating category becomes a barrier. In fact, under the modified barrier theory, subjacency condition can be said to be stronger than it was in Chomsky(1986). I applied the modified theory to every sentence which raised problems for barriers and showed that the new definition works well.

NOTES

1. Recall that I am now extending the theory in the line that there is no adjunction in syntactic movement except extraposition and topicalization which can be considered as stylistic phenomena.

2. I am not sure whether I can extend this licensing condition to the other categories such as C, or D. I assumed in (30) that I L-marks its complement VP and also L-marks the Spec of VP (I am now assuming VP-internal hypothesis

especially in explaining NP-movement as an experiment to extend and testify Rizzi's proposal. I think this licensing condition can be called roughly ' a head-licensing condition' because in this condition the role of head-category such as verb or noun etc.to license traces is critical. I think it works well with the data so far. If this licensing condition is fully developed , then I think it will be very helpful for us to judge grammaticality of linguistic data together with subjacency condition. In fact, Chomsky(1986:24) also mentioned a similar suggestion with Rizzi(1989). Revising his L-marking condition, he mentioned that a lexical category can L-mark not only its complement but also the Spec of the complement. His condition for L-marking is as follows ; "where a is a lexical category, a L-marks b iff b agrees with the head of r that is theta-governed by a".

3. In fact, this process can raise some argument., since it is not clear whether I has the feature [+V] or [-V]. If we think of the Spec-head agreement , especially in terms of number, then I seems to be nearer to [-V]. On the other hand, if we consider that verbs raise to I and theta-govern VP, then it seems to be more like [+V]. For this case of (30a,b,c), I must be [+v] to L-mark the trace in the Spec of VP.

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